

AND5414-7US.ST25.txt
SEQUENCE LISTING

<110> Xu, Hong-Ji
Hu, Shi-Xue
Mills, Gordon B.

<120> ENDOGENOUS GRANZYME B IN NON-IMMUNE CELLS

<130> AND541/4-007US/58011

<140> Unknown

<141> 2003-09-24

<150> 60/413,591

<151> 2002-09-25

<160> 6

<170> PatentIn version 3.1

<210> 1

<211> 1977

<212> DNA

<213> Homo sapiens

<400> 1

```
tcacaagaat cgaaccatgt agagagactt agttgtcttt taacagaatt gggcacgggc      60
tgttcagaaa caacaatctt tcacatccat tataatgata gcattagtgt agtttgttta    120
gcaaattgttt actgtgagcc tgttatgtgc tgagcctgct atgtaagaag tgtggctctc    180
tggacaggag acagaatact aaacaacaca actactgata tttggctgcc tggcatgctt    240
cctcacttca tatggtatca gcaatttagc accacaaacg tccttttagag aaccagccct    300
ttctcattct tggttctagt ggcttgagta gactgacccc agcctacca aagtggattt    360
gactcctagc aattcattaa tctagcccaa tccaataaaa tgtcaagtac aggactttta    420
ttgaaagcat tcagaaaaga ggtggactct cactactaac atttgtaact aaataaggga    480
tgttagaaat tctctagaaa ggaagctatg ataataaatg gggtgctaga tgggtctagt    540
agatggtggc cgtgctttgt tactgccttg tgtattgtgc taccatagcc ctcccaaac    600
tgtactctgg ctcttgcat ttccgtctct tcaaccagat ggtcagctct ctaagtgaag    660
gagacacatc tccaacatgc ttggttctag cacaacagaa gggctcaaac acatacctgc    720
taaagaaact atcctgatgg atttagcagc atggccatga ggcattggcg gttctatcac    780
tgggaaactca ggtttctggt gctccagtac ctctactggc tgataccaca tcctacaatt    840
catttcatag gcttgggttc ctgctctggg ctgaataggt ggtccactct gagtcatcag    900
ctgtgggtga tgatgtggtc actgcatgat tctcacacaa gcaccagag gacgtcatca    960
ggcagaggca gtgggggtgg gcagcattta cagaaaatct gtgatgagac accacaaaac   1020
cagaggggaa catgaagtca ctgagcctgc tccacctctt tcctctccca agagctaaaa   1080
gagagcaagg aggaaacaac agcagctcca accaggggcag ccttcctgag aagatgcaac   1140
```

AND5414-7US.ST25.txt

```

caatcctgct tctgctggcc ttcctcctgc tgcccagggc agatgcaggg gagatcatcg 1200
ggggacatga ggccaagccc cactcccgcc cctacatggc ttatcttatg atctgggatc 1260
agaagtctct gaagaggtgc ggtggcttcc tgatacaaga cgacttcgtg ctgacagctg 1320
ctcactgttg gggaagctcc ataaatgtca ccttgggggc ccacaatatc aaagaacagg 1380
agccgaccca gcagtttatc cctgtgaaaa gacccatccc ccatccagcc tataatccta 1440
agaacttctc caacgacatc atgctactgc agctggagag aaaggccaag cggaccagag 1500
ctgtgcagcc cctcaggcta cctagcaaca agggccaggt gaagccaggg cagacatgca 1560
gtgtggccgg ctgggggagc acggccccc tgggaaaaca ctcacacaca ctacaagagg 1620
tgaagatgac agtgcaggaa gatcgaaagt gcgaatctga cttacgcatc tattacgaca 1680
gtaccattga gttgtgctg ggggaccag agattaaaaa gacttccttt aagggggact 1740
ctggaggccc tcttgtgtgt aacaaggtgg ccagggcat tgtctcctat ggacgaaaca 1800
atggcatgcc tccacgagcc tgcaccaaag tctcaagctt tgtacactgg ataaagaaaa 1860
ccatgaaacg ctactaacta caggaagcaa actaagcccc cgctgtaatg aaacaccttc 1920
tctggagcca agtccagatt tacactggga gaggtgccag caactgaata aatacct 1977

```

<210> 2
 <211> 946
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(843)
 <223>

```

<400> 2
atg aag tca ctg agc ctg ctc cac ctc ttt cct ctc cca aga gct aaa 48
Met Lys Ser Leu Ser Leu Leu His Leu Phe Pro Leu Pro Arg Ala Lys
1 5 10 15

aga gag caa gga gga aac aac agc agc tcc aac cag ggc agc ctt cct 96
Arg Glu Gln Gly Gly Asn Asn Ser Ser Ser Asn Gln Gly Ser Leu Pro
20 25 30

gag aag atg caa cca atc ctg ctt ctg ctg gcc ttc ctc ctg ctg ccc 144
Glu Lys Met Gln Pro Ile Leu Leu Leu Ala Phe Leu Leu Leu Pro
35 40 45

agg gca gat gca ggg gag atc atc ggg gga cat gag gcc aag ccc cac 192
Arg Ala Asp Ala Gly Glu Ile Ile Gly Gly His Glu Ala Lys Pro His
50 55 60

tcc cgc ccc tac atg gct tat ctt atg atc tgg gat cag aag tct ctg 240
Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser Leu
65 70 75 80

aag agg tgc ggt ggc ttc ctg ata caa gac gac ttc gtg ctg aca gct 288
Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr Ala

```

AND5414-7US.ST25.txt

85	90	95	
gct cac tgt tgg gga agc tcc ata aat gtc acc ttg ggg gcc cac aat Ala His Cys Trp 100 Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His Asn	105	110	336
atc aaa gaa cag gag ccg acc cag cag ttt atc cct gtg aaa aga ccc Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg Pro	115	120 125	384
atc ccc cat cca gcc tat aat cct aag aac ttc tcc aac gac atc atg Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile Met	130	135 140	432
cta ctg cag ctg gag aga aag gcc aag cgg acc aga gct gtg cag ccc Leu Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln Pro	145	150 155 160	480
ctc agg cta cct agc aac aag gcc cag gtg aag cca ggg cag aca tgc Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr Cys	165	170 175	528
agt gtg gcc ggc tgg ggg cag acg gcc ccc ctg gga aaa cac tca cac Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser His	180	185 190	576
aca cta caa gag gtg aag atg aca gtg cag gaa gat cga aag tgc gaa Thr Leu Gln Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys Glu	195	200 205	624
tct gac tta cgc cat tat tac gac agt acc att gag ttg tgc gtg ggg Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val Gly	210	215 220	672
gac cca gag att aaa aag act tcc ttt aag ggg gac tct gga ggc cct Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly Pro	225	230 235 240	720
ctt gtg tgt aac aag gtg gcc cag ggc att gtc tcc tat gga cga aac Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg Asn	245	250 255	768
aat ggc atg cct cca cga gcc tgc acc aaa gtc tca agc ttt gta cac Asn Gly Met Pro Pro Arg Ala Cys Thr Lys Val Ser Ser Phe Val His	260	265 270	816
tgg ata aag aaa acc atg aaa cgc tac taactacagg aagcaaacta Trp Ile Lys Lys Thr Met Lys Arg Tyr	275	280	863
agccccgct gtaatgaaac accttctctg gagccaagtc cagatttaca ctgggagagg			923
tgccagcaac tgaataaata cct			946

<210> 3
 <211> 281
 <212> PRT
 <213> Homo sapiens
 <400> 3

Met Lys Ser Leu Ser Leu Leu His Leu Phe Pro Leu Pro Arg Ala Lys
 Page 3

```

1           5           10           15
Arg Glu Gln Gly Gly Asn Asn Ser Ser Ser Asn Gln Gly Ser Leu Pro
      20      25      30
Glu Lys Met Gln Pro Ile Leu Leu Leu Leu Ala Phe Leu Leu Leu Pro
      35      40      45
Arg Ala Asp Ala Gly Glu Ile Ile Gly Gly His Glu Ala Lys Pro His
      50      55      60
Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser Leu
      65      70      75      80
Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr Ala
      85      90      95
Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His Asn
      100     105     110
Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg Pro
      115     120     125
Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile Met
      130     135     140
Leu Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln Pro
      145     150     155     160
Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr Cys
      165     170     175
Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser His
      180     185     190
Thr Leu Gln Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys Glu
      195     200     205
Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val Gly
      210     215     220
Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly Pro
      225     230     235     240
Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg Asn
      245     250     255

```

Asn Gly Met Pro Pro Arg Ala Cys Thr Lys Val Ser Ser Phe Val His
 260 265 270

AND5414-7US.ST25.txt

Trp Ile Lys Lys Thr Met Lys Arg Tyr
 275 280

<210> 4
 <211> 846
 <212> DNA
 <213> Homo sapiens

<400> 4
 atgaagtcac tgagcctgct ccacctcttt cctctcccaa gagctaaaag agagcaagga 60
 ggaaacaaca gcagctccaa ccagggcagc cttcctgaga agatgcaacc aatcctgctt 120
 ctgctggcct tcctcctgct gcccagggca gatgcagggg agatcatcgg gggacatgag 180
 gccaagcccc actcccgccc ctacatggct tatcttatga tctgggatca gaagtctctg 240
 aagaggtgcg gtggcttcct gatacaagac gacttcgtgc tgacagctgc tctactgttg 300
 ggaagctcca taaatgtcac cttggggggc cacaatatca aagaacagga gccgaccag 360
 cagtttatcc ctgtgaaaag acccatcccc catccagcct ataatcctaa gaacttctcc 420
 aacgacatca tgctactgca gctggagaga aaggccaagc ggaccagagc tgtgcagccc 480
 ctgaggctac ctagcaacaa ggcccagggtg aagccagggc agacatgcag tgtggccggc 540
 tgggggcaga cggccccctt gggaaaacac tcacacacac tacaagaggt gaagatgaca 600
 gtgcaggaag atcgaaagtg cgaatctgac ttacgccatt attacgacag taccattgag 660
 ttgtgcgtgg gggaccaga gattaaaaag acttccttta agggggactc tggaggccct 720
 cttgtgtgta acaaggtggc ccagggcatt gtctcctatg gacgaaacaa tggcatgcct 780
 ccacgagcct gcaccaaagt ctcaagcttt gtacactgga taaagaaac catgaaacgc 840
 tactaa 846

<210> 5
 <211> 952
 <212> DNA
 <213> Homo sapiens

<400> 5
 gggaacatga agtcactgag cctgctccac ctctttcctc tccaagagc taaaagagag 60
 caaggaggaa acaacagcag ctccaaccag ggcagccttc ctgagaagat gcaaccaatc 120
 ctgcttctgc tggccttcct cctgctgccc agggcagatg caggggagat catcggggga 180
 catgaggcca agccccactc ccgcccctac atggccttatc ttatgatctg ggatcagaag 240
 tctctgaaga ggtgcggtgg cttcctgata caagacgact tcgtgctgac agctgctcac 300
 tgttggggaa gctccataaa tgtcaccttg ggggccca atatcaaaga acaggagccg 360

AND5414-7US.ST25.txt

acccagcagt ttatccctgt gaaaagaccc atccccatc cagcctataa tcctaagaac 420
 ttctccaacg acatcatgct actgcagctg gagagaaagg ccaagcggac cagagctgtg 480
 cagccccctca ggctacctag caacaaggcc caggtgaagc cagggcagac atgcagtgtg 540
 gccggctggg ggcagacggc ccccctggga aaacactcac acacactaca agaggtgaag 600
 atgacagtgc aggaagatcg aaagtgcgaa tctgacttac gccattatta cgacagtacc 660
 attgagttgt gcgtggggga cccagagatt aaaaagactt cctttaaggg ggactctgga 720
 ggccctcttg tgtgtaacaa ggtggcccag ggcattgtct cctatggacg aaacaatggc 780
 atgcctccac gagcctgcac caaagtctca agctttgtac actggataaa gaaaaccatg 840
 aaacgctact aactacagga agcaactaa gccccgctg taatgaaaca ctttctctgg 900
 agccaagtcc agatttacac tgggagaggt gccagcaact gaataaatac ct 952

<210> 6
 <211> 1091
 <212> DNA
 <213> Homo sapiens

<400> 6
 actctgagtc atcagctgtg ggtgatgatg tggtcactgc atgattctca cacaagcacc 60
 cagaggacgt catcaggcag aggcagtggg ggtgggcagc atttacagaa aatctgtgat 120
 gagacaccac aaaaccagag gggaaacatga agtcactgag cctgctccac ctctttcctc 180
 tccaagagc taaaagagag caaggaggaa acaacagcag ctccaaccag ggcagccttc 240
 ctgagaagat gcaaccaatc ctgcttctgc tggccttcct cctgctgccc agggcagatg 300
 caggggagat catcggggga catgaggcca agccccactc ccgcccctac atggcttatac 360
 ttatgatctg ggatcagaag tctctgaaga ggtgcggtgg cttcctgata caagacgact 420
 tcgtgctgac agctgctcac tgttggggaa gctccataaa tgtcaccttg gggggccaca 480
 atatcaaaga acaggagccg acccagcagt ttatccctgt gaaaaacca tccccatcc 540
 agcctataat cctaagaact tctccaacga catcatgcta ctgcagctgg agagaaaggc 600
 caagcggacc agagctgtgc agcccctcag gctacctagc aacaaggccc aggtgaagcc 660
 agggcagaca tgcagtgtgg ccggctgggg gcagacggcc cccctgggaa aacactcaca 720
 cacactacaa gaggtgaaga tgacagtga ggaagatcga aagtgcgaat ctgacttacg 780
 ccattattac gacagtacca ttgagttgtg cgtgggggac ccagagatta aaaagacttc 840
 ctttaagggg gactctggag gccctcttgt gtgtaacaag gtggcccagg gcattgtctc 900
 ctatggacga aacaatggca tgcctccacg agcctgcacc aaagtctcaa gctttgtaca 960
 ctggataaag aaaaccatga aacgctacta actacaggaa gcaaactaag cccccgctgt 1020
 aatgaaacac cttctctgga gccaaagtcca gatttacact gggagaggtg ccagcaactg 1080

. . . .

aataaatacc t

AND5414-7US.ST25.txt

1091